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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/556,086	04/21/2000	Maxwell J. Wells	1702-1-3	7449

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GRAYBEAL, JACKSON, HALEY LLP
155 - 108TH AVENUE NE
SUITE 350
BELLEVUE, WA 98004-5901

EXAMINER

FERRIS III, FRED O

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 06/17/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/556,086

Applicant(s)

WELLS ET AL.

Examiner

Fred Ferris

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24, 26, 27, 29-31 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24, 26, 27, 29-31 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3.4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. *Claims 1-33 have been presented for examination based on applicant's Preliminary Amendment filed on 5 September 2000 (paper # 2). Applicants have cancelled claims 21, 25, 28, and 32. Claims 1-22, 22-24, 26-27, 29-31 and 33 are currently pending in this application. The examiner has rejected claims 1-22, 22-24, 26-27, 29-31 and 33.*

Priority

2. *Applicant's claim for priority benefit to United States Provisional Patent Application Serial No. 60/153,768 filed 14 September 1999 is acknowledged. However, an application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.*

Drawings

3. *The drawings submitted on 21 April 2000 have been approved by the examiner pending review by the draftsman.*

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-22, 22-24, 26-27, 29-31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,918,223 issued to Blum et al in view of U.S. Patent 5,616,876 issued to Cluts.

Independent claims 1, 3, 5, 6, 10, 18 are drawn to limitation including:

Building a model, generating a data record, creating/searching a database of differences for recorded music by:

Extracting scalar descriptors numerically describing recorded music by:

Extracting numeric parameters from electronic representation

Weighting parameters to compute number representing descriptors;

Extracting same (2) numeric parameters from (5) recordings

Weighting recording parameters to compute recording descriptor number (parameter comparison algorithm)

Adjusting weighting based on perception of human listeners

Regarding independent claims 1, 3, 5, 6, 10, and 18: Blum et al discloses the elements of the claimed limitations of the present invention as follows:

- *Extracting scalar descriptors numerically describing recorded music: Blum discloses the extraction of scalar (vector) descriptors that numerically describe recorded music and creating/searching a database of recorded audio data. (Abstract, CL6-L12, CL6-L54, Figs. 1-5)*
- *Extracting numeric parameters from electronic representation: Blum discloses extracting numeric parameters from the electronic representation. (CL7-L14-45, CL15-L29, Figs. 2, 14)*
- *Weighting parameters to compute number representing descriptors: Blum discloses the use of audio waveform weighting parameters to compute numerical values representing descriptors. (CL10-L67 to CL11-L45, Figs. 6-7)*
- *Extracting same (2) numeric parameters from (5) recordings: Blum discloses extracting multiple parameters from (n) number of recorded audio files. (CL7-L47, CL13-L1, CL16-L37, CL17-L7)*
- *Weighting recording parameters to compute recording descriptor number: Blum discloses weighting audio waveform sample (recorded) parameters to compute a description (numerical) of the sample. (Abstract, CL10-L67 to CL11-L45, Figs. 6-7)*
- *parameter comparison algorithm: Blum discloses comparing audio sample (recorded) parameters and would obviously inherently include a comparison algorithm. (CL10-L67 to CL11-L45, CL17-L7 to CL19-L35, Figs. 6-7)*

- Adjusting weighting based on perception of human listeners: *Blum discloses adjusting the audio waveform weighting. (Abstract, CL10-L67 to CL11-L45, Figs. 6-7)*

Also see: Abstract, Summary of Invention, CL22-L29-CL26-L9, Figs. 1-20)

Blum does not explicitly teach the application of weighting based on the categorized perception of human listeners.

Cluts discloses the use of weighting based on "perception" as reported by human listeners. The weighing includes categories such as "likeness", "more like", and "dislike" and includes selection from style tables including genre, rhythm, and tempo features. (Abstract, Summary of Invention, CL2-L60-67, CL11-L31-CL12-L53, CL14-L12-50, CL17-L50-61, Figs. 4-10)

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings of Blum relating to creating and searching a music database by performing an analysis of recorded audio data, with the teachings of Cluts relating to the use of weighting based on a human listeners perception, to realize the claimed invention. An obvious motivation exists since, as referenced in the prior art, adjusting (weighting) the indicators based on a listeners preferences provides a more accurate and realistic indication of user preferences for classifying each song's suggestive content. (See Cluts: Background, CL14-L13-50)

Per independent claim 26: Blum discloses database searching of target music sample (recordings) while Cluts discloses weighting based on human perceptions of one or more listeners as cited above.

Per dependent claims 2, 3, 4, 7-9, 11-17, 19-20, 22-24, 27, 29-31, and 33: This group of claims is drawn to adjusting, increasing/decreasing, and correlating the perception parameters and the computer readable medium of the limitations previously addressed and are therefore rejected using the same reasoning as cited above.

Conclusion

5. *The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.*

U.S. Patent 6,201,176 issued to Yourio teaches listener music databases.

U.S. Patent 5,616,876 issued to Cluts teaches music content databases.

"Toward the Digital Music Library: Tune Retrieval from Acoustic Input", R. McNab, DL 96', ACM 0-89791-830-4-96/03, ACM 1996 teaches listener music databases.

"Automatic Audio Content Analysis", S. Pheiffer, ACM Multimedia 96', pp. 21-30, ACM 1996 teaches audio analysis and database content.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 703-305-9670 and whose normal working hours are 8:30am to 5:00pm Monday to Friday.

Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 703-305-3900.

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Art Unit: 2128

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The Official Fax Numbers are:

Official (703) 872-9306

Fred Ferris, Patent Examiner
Simulation and Emulation, Art Unit 2128
U.S. Patent and Trademark Office
Crystal Park 2, Room 2A22
Crystal City, Virginia 22202
Phone: (703) 305 - 9670
FAX: (703) 305 - 7240
Fred.Ferris@uspto.gov

June 9, 2004



KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER